

# Florian N Ruske

## List of Publications by Year in descending order

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66  
papers

1,674  
citations

257101

24  
h-index

288905

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66  
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66  
docs citations

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times ranked

1472  
citing authors

#	ARTICLE	IF	CITATIONS
1	Hybrid Perovskite Degradation from an Optical Perspective: A Spectroscopic Ellipsometry Study from the Deep Ultraviolet to the Middle Infrared. <i>Advanced Optical Materials</i> , 2022, 10, 2101553.	3.6	10
2	Optoelectrical analysis of TCO+Silicon oxide double layers at the front and rear side of silicon heterojunction solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2022, 236, 111493.	3.0	26
3	Elucidating the Effect of the Different Buffer Layers on the Thermal Stability of CIGSe Solar Cells. <i>IEEE Journal of Photovoltaics</i> , 2021, 11, 648-657.	1.5	2
4	Influence of Silicon Layers on the Growth of ITO and AZO in Silicon Heterojunction Solar Cells. <i>IEEE Journal of Photovoltaics</i> , 2020, 10, 703-709.	1.5	31
5	Energy-Level Alignment Tuning at Tetracene/c-Si Interfaces. <i>Journal of Physical Chemistry C</i> , 2020, 124, 27867-27881.	1.5	12
6	Advantageous light management in Cu(In,Ga)Se <sub>2</sub> superstrate solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2016, 150, 76-81.	3.0	24
7	Light trapping for a-Si:H/ $\mu$ c-Si:H tandem solar cells using direct pulsed laser interference texturing. <i>Physica Status Solidi - Rapid Research Letters</i> , 2015, 9, 36-40.	1.2	12
8	Water-assisted nitrogen mediated crystallisation of ZnO films. <i>Thin Solid Films</i> , 2015, 590, 177-183.	0.8	5
9	High mobility In <sub>2</sub> O <sub>3</sub> :H as contact layer for a-Si:H/c-Si heterojunction and $\mu$ c-Si:H thin film solar cells. <i>Thin Solid Films</i> , 2015, 594, 316-322.	0.8	24
10	Combination of nitrogen mediated crystallisation with post-deposition annealing – Towards ultra-thin ZnO:Al contacts. <i>Thin Solid Films</i> , 2015, 589, 750-754.	0.8	3
11	Improved conversion efficiency of a-Si:H/ $\mu$ c-Si:H thin film solar cells by using annealed Al-doped zinc oxide as front electrode material. <i>Progress in Photovoltaics: Research and Applications</i> , 2014, 22, 1285-1291.	4.4	24
12	Very thin, highly conductive ZnO:Al front electrode on textured glass as substrate for thin film silicon solar cells. <i>Physica Status Solidi - Rapid Research Letters</i> , 2014, 8, 44-47.	1.2	10
13	Crack formation and Zn diffusion in high-temperature processed poly-Si/ZnO:Al stacks. <i>Thin Solid Films</i> , 2014, 566, 83-87.	0.8	3
14	Material properties of high-mobility TCOs and application to solar cells. <i>Proceedings of SPIE</i> , 2014, , .	0.8	1
15	Direct pulsed laser interference texturing for light trapping in a-Si:H/ $\mu$ c-Si:H tandem solar cells. <i>Proceedings of SPIE</i> , 2014, , .	0.8	0
16	A comparison of scattering and non-scattering anti-reflection designs for back contacted polycrystalline thin film silicon solar cells in superstrate configuration. , 2014, , .		2
17	Potential of high-mobility sputtered zinc oxide as front contact for high efficiency thin film silicon solar cells. <i>Thin Solid Films</i> , 2014, 555, 138-142.	0.8	7
18	Conversion efficiency and process stability improvement of electron beam crystallized thin film silicon solar cells on glass. <i>Solar Energy Materials and Solar Cells</i> , 2014, 123, 13-16.	3.0	49

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19	Solution-Processed Crystalline Silicon Thin-Film Solar Cells. <i>Advanced Materials Interfaces</i> , 2014, 1, 1300046.	1.9	17
20	Advanced microhole arrays for light trapping in thin film silicon solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2014, 125, 298-304.	3.0	6
21	Annealing related changes in near-edge absorption and structural properties of Al-doped ZnO thin films. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2014, 11, 1468-1471.	0.8	0
22	The complex interface chemistry of thin-film silicon/zinc oxide solar cell structures. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 26266-26272.	1.3	9
23	Damp heat stable doped zinc oxide films. <i>Thin Solid Films</i> , 2014, 555, 48-52.	0.8	43
24	Towards wafer quality crystalline silicon thin-film solar cells on glass. <i>Solar Energy Materials and Solar Cells</i> , 2014, 128, 190-197.	3.0	105
25	Chemical interaction at the buried silicon/zinc oxide thin-film solar cell interface as revealed by hard X-ray photoelectron spectroscopy. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2013, 190, 309-313.	0.8	6
26	Optical properties and Limits of a Large-Area Periodic Nanophotonic Light Trapping Design for Polycrystalline Silicon Thin Film Solar Cells. <i>Materials Research Society Symposia Proceedings</i> , 2013, 1493, 59-64.	0.1	2
27	Identification of intra-grain and grain boundary defects in polycrystalline Si thin films by electron paramagnetic resonance. <i>Physica Status Solidi - Rapid Research Letters</i> , 2013, 7, 959-962.	1.2	16
28	Light trapping in polycrystalline silicon thin-film solar cells based on liquid phase crystallization on textured substrates. , 2013, , .		3
29	Analysis of Urbach-like absorption tails in thermally treated ZnO:Al thin films. <i>Applied Physics Letters</i> , 2013, 103, 192108.	1.5	14
30	ZnO:Al with tuned properties for photovoltaic applications: thin layers and high mobility material. <i>Proceedings of SPIE</i> , 2013, , .	0.8	3
31	Structural properties of Si/SiO <sub>2</sub> nanostructures grown by decomposition of substoichiometric SiO <sub>x</sub> layers for photovoltaic applications. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2013, 210, 676-681.	0.8	0
32	Optical characterization of high mobility polycrystalline ZnO:Al films. <i>Proceedings of SPIE</i> , 2012, , .	0.8	8
33	High mobility annealing of Transparent Conductive Oxides. <i>IOP Conference Series: Materials Science and Engineering</i> , 2012, 34, 012004.	0.3	9
34	Structural investigations of silicon nanostructures grown by self-organized island formation for photovoltaic applications. <i>Applied Physics A: Materials Science and Processing</i> , 2012, 108, 719-726.	1.1	5
35	On the influence of sub-wavelength Al/Si interface roughness on the efficiency of crystalline Si-solar cells. <i>Thin Solid Films</i> , 2012, 525, 158-161.	0.8	1
36	As-grown textured zinc oxide films by ion beam treatment and magnetron sputtering. <i>Thin Solid Films</i> , 2012, 520, 4208-4213.	0.8	13

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37	Improving the electrical and optical properties of DC-sputtered ZnO:Al by thermal post deposition treatments. <i>Thin Solid Films</i> , 2012, 520, 4203-4207.	0.8	39
38	Deposition and Properties of TCOs. <i>Engineering Materials</i> , 2012, , 301-330.	0.3	6
39	Pretreatment of glass substrates by Ar/O <sub>2</sub> ion beams for the as-sputtered rough Al doped zinc oxide thin films. <i>Surface and Coatings Technology</i> , 2011, 205, S223-S228.	2.2	4
40	Reactive sputtering of ZnO/ZnO:Al contacts for chalcopyrite solar modules. <i>Thin Solid Films</i> , 2011, 520, 1295-1298.	0.8	0
41	Hard x-ray photoelectron spectroscopy study of the buried Si/ZnO thin-film solar cell interface: Direct evidence for the formation of Si-O at the expense of Zn-O bonds. <i>Applied Physics Letters</i> , 2011, 99, .	1.5	28
42	Band lineup in amorphous/crystalline silicon heterojunctions and the impact of hydrogen microstructure and topological disorder. <i>Physical Review B</i> , 2011, 83, .	1.1	96
43	Rigorous optical simulation of light management in crystalline silicon thin film solar cells with rough interface textures. <i>Proceedings of SPIE</i> , 2011, , .	0.8	9
44	Optical on-line monitoring for the long-term stabilization of a reactive mid-frequency sputtering process of Al-doped zinc oxide films. <i>Thin Solid Films</i> , 2010, 518, 3115-3118.	0.8	5
45	Impact of solid-phase crystallization of amorphous silicon on the chemical structure of the buried Si/ZnO thin film solar cell interface. <i>Applied Physics Letters</i> , 2010, 97, 072105.	1.5	11
46	Improved electrical transport in Al-doped zinc oxide by thermal treatment. <i>Journal of Applied Physics</i> , 2010, 107, .	1.1	172
47	Microstructure and photovoltaic performance of polycrystalline silicon thin films on temperature-stable ZnO:Al layers. <i>Journal of Applied Physics</i> , 2009, 106, .	1.1	47
48	Influence of Hydrogen Plasma on the Defect Passivation of Polycrystalline Si Thin Film Solar Cells. <i>Plasma Processes and Polymers</i> , 2009, 6, S36.	1.6	33
49	Influence of damp heat on the optical and electrical properties of Al-doped zinc oxide. <i>Thin Solid Films</i> , 2009, 517, 2291-2294.	0.8	42
50	Optical modeling of free electron behavior in highly doped ZnO films. <i>Thin Solid Films</i> , 2009, 518, 1289-1293.	0.8	70
51	DC reactive sputtering of aluminium doped zinc oxide films for solar modules controlled by target voltage. <i>Thin Solid Films</i> , 2009, 518, 1204-1207.	0.8	18
52	Solid-phase crystallization of amorphous silicon on ZnO:Al for thin-film solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2009, 93, 855-858.	3.0	26
53	Polycrystalline silicon thin-film solar cells on glass. <i>Solar Energy Materials and Solar Cells</i> , 2009, 93, 1004-1008.	3.0	75
54	High power pulsed magnetron sputtering of transparent conducting oxides. <i>Thin Solid Films</i> , 2008, 516, 5847-5859.	0.8	101

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55	Reactive deposition of aluminium-doped zinc oxide thin films using high power pulsed magnetron sputtering. <i>Thin Solid Films</i> , 2008, 516, 4472-4477.	0.8	39
56	Polycrystalline Silicon Thin-film Solar Cells on ZnO:Al Coated Glass. <i>Materials Research Society Symposia Proceedings</i> , 2008, 1066, 1.	0.1	2
57	Temperature stability of ZnO:Al film properties for poly-Si thin-film devices. <i>Applied Physics Letters</i> , 2007, 91, 241911.	1.5	39
58	Large area ZnO:Al films with tailored light scattering properties for photovoltaic applications. <i>Thin Solid Films</i> , 2007, 515, 8695-8698.	0.8	64
59	Flux of Positive Ions and Film Growth in Reactive Sputtering of Al-Doped ZnO Thin Films. <i>Plasma Processes and Polymers</i> , 2007, 4, S336-S340.	1.6	5
60	Determination of Plasma Parameters during Deposition of ZnO Films by Ceramic and Metallic Targets and Correlation with Film Properties. <i>Plasma Processes and Polymers</i> , 2007, 4, S527-S530.	1.6	3
61	Process stabilisation for large area reactive MF-sputtering of Al-doped ZnO. <i>Thin Solid Films</i> , 2006, 502, 44-49.	0.8	14
62	ZnO:Al films deposited by in-line reactive AC magnetron sputtering for a-Si:H thin film solar cells. <i>Thin Solid Films</i> , 2006, 496, 16-25.	0.8	88
63	Hydrogen doping of DC sputtered ZnO:Al films from novel target material. <i>Surface and Coatings Technology</i> , 2005, 200, 236-240.	2.2	42
64	Optical characterization of aluminum-doped zinc oxide films by advanced dispersion theories. <i>Thin Solid Films</i> , 2004, 455-456, 201-206.	0.8	60
65	Reversible changes in the lattice site structure for In implanted into GaN. <i>Applied Physics Letters</i> , 2002, 80, 4531-4533.	1.5	21
66	Annealing Behaviour of GaN after Implantation with Hafnium and Indium. <i>Physica Status Solidi (B): Basic Research</i> , 2001, 228, 331-335.	0.7	10